Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-13. (Canceled)

14. (Currently amended) A method to determine outcome of a human subject having ER+ (estrogen receptor positive) breast cancer if treated with an ~~aromatase inhibitor~~ antiestrogen agent against breast cancer, said method comprising:

producing cDNA copies of homeobox B13 (HoxB13) and interleukin 17B receptor (IL17BR) mRNA from a sample of ER+ (estrogen receptor positive) breast cancer cells from said human subject,

determining a ratio of HoxB13 to IL17BR mRNA expression levels based on said cDNA copies, and

determining the ratio as higher than a mean (average) ratio of HoxB13 and IL17BR RNA expression levels in ER+ breast cancer cells and as indicating an outcome comprising cancer that is non-responsive to said ~~aromatase inhibitor~~ antiestrogen agent;

wherein said mean (average) ratio of HoxB13 and IL17BR RNA expression levels is determined from a mean (average) of HoxB13 mRNA expression levels, and a mean (average) of IL17BR mRNA expression levels, in ER+ breast cancer cell samples from human breast cancer subjects that responded to treatment with said ~~aromatase inhibitor~~ antiestrogen agent against breast cancer and from human breast cancer subjects that did not respond to treatment with said ~~aromatase inhibitor~~ antiestrogen agent, and

wherein said antiestrogen agent is tamoxifen or letrozole.

15. (Canceled).

16. (Currently amended) The method of claim 14 wherein said ~~aromatase inhibitor (AI)~~ antiestrogen agent is tamoxifen ~~a non-steroidal agent~~.

17. (Canceled).

18. (Previously presented) The method of claim 14 wherein said cDNA copies of HoxB13 and IL17BR RNA are used for RNA amplification from said sample of breast cancer cells.

19. (Previously presented) The method of claim 14 wherein said cDNA copies of HoxB13 and IL17BR RNA are used in quantitative PCR.

20. (Previously presented) The method of claim 19 wherein said quantitative PCR is real-time PCR and said ratio of HoxB13 and IL17BR RNA expression levels is expressed as a ΔC_t of the C_t values for HoxB13 and IL17BR RNA expression levels.

21. (Previously presented) The method of claim 14 wherein said sample is a formalin fixed paraffin embedded (FFPE) sample.

22. (Original) The method of claim 14 wherein said sample is obtained by a minimally invasive technique or selected from core biopsy, excisional biopsy, a ductal lavage sample, a fine needle aspiration sample, or cells microdissected from said sample.

23. (Currently amended) A method to predict an expected lack of response to treatment with an ~~aromatase inhibitor~~ antiestrogen agent against breast cancer in a human ER+ (estrogen receptor positive) breast cancer patient, said method comprising

producing cDNA copies of homeobox B13 (HoxB13) and interleukin 17B receptor (IL17BR) mRNA from a sample of ER+ (estrogen receptor positive) breast cancer cells from said patient,

determining a ratio of HoxB13 and IL17BR RNA expression levels based on said cDNA copies, and

determining the ratio as higher than a mean (average) ratio of HoxB13 and IL17BR RNA expression in ER+ breast cancer cells and as indicating said cancer as expected to lack response to treatment with said ~~aromatase inhibitor~~ antiestrogen agent;

wherein said mean (average) ratio of HoxB13 and IL17BR RNA expression levels is determined from a mean (average) of HoxB13 mRNA expression levels, and a mean (average) of IL17BR

mRNA expression levels, in ER+ breast cancer cell samples from human breast cancer subjects that responded to treatment with said ~~aromatase inhibitor~~ antiestrogen agent against breast cancer and from human breast cancer subjects that did not respond to treatment with said ~~aromatase inhibitor~~ antiestrogen agent, and

wherein said antiestrogen agent is tamoxifen or letrozole.

24. (Canceled).

25. (Currently amended) The method of ~~claim 24~~ claim 23 wherein said ~~aromatase inhibitor (AI)~~ antiestrogen agent is tamoxifen ~~a non-steroidal agent~~.

26. (Canceled).

27. (Currently amended) The method of ~~claim 24~~ claim 23 wherein said cDNA copies of HoxB13 and IL17BR RNA are used for RNA amplification from said sample of breast cancer cells.

28. (Currently amended) The method of ~~claim 24~~ claim 23 wherein said cDNA copies of HoxB13 and IL17BR RNA are used in quantitative PCR.

29. (Previously presented) The method of claim 28 wherein said quantitative PCR is real-time PCR and said ratio of HoxB13 and IL17BR RNA expression levels is expressed as a ΔC_t of the C_t values for HoxB13 and IL17BR RNA expression levels.

30. (Currently amended) The method of ~~claim 24~~ claim 23 wherein said sample is a formalin fixed paraffin embedded (FFPE) sample.

31. (Currently amended) The method of ~~claim 24~~ claim 23 wherein said sample is obtained by a minimally invasive technique or selected from core biopsy, excisional biopsy, a ductal lavage sample, a fine needle aspiration sample, or cells microdissected from said sample.

32-51. (Canceled).

52. (Previously presented) The method of claim 14 wherein said cDNA copies comprise a HoxB13 sequence selected from SEQ ID NOS: 6, 7, 10, 11-31, 35 or 37.

53. (Previously presented) The method of claim 14 wherein said cDNA copies comprise an IL17BR sequence selected from SEQ ID NOs: 1, 2, 3, or 8, or 32-34.

54. (Previously presented) The method of claim 23 wherein said cDNA copies comprise a HoxB13 sequence selected from SEQ ID NOS: 6, 7, 10, 11-31, 35 or 37.

55. (Previously presented) The method of claim 23 wherein said cDNA copies comprise an IL17BR sequence selected from SEQ ID NOs: 1, 2, 3, or 8, or 32-34.

56-61. (Canceled).

62. (Previously presented) The method of claim 14 wherein said determining a ratio of HoxB13 to IL17BR mRNA expression levels based on cDNA copies comprises hybridization of said cDNA copies to a polynucleotide comprising sequences of at least 15 nucleotides from the 3' untranslated region, the coding region, or the 5' untranslated region of human HoxB13 or IL17BR sequences.

63. (Previously presented) The method of claim 23 wherein said determining a ratio of HoxB13 and IL17BR RNA expression levels based on said cDNA copies comprises hybridization of said cDNA copies to a polynucleotide comprising sequences of at least 15 nucleotides from the 3' untranslated region, the coding region, or the 5' untranslated region of human HoxB13 or IL17BR sequences.

64-70. (Canceled).

71. (Currently amended) The method of ~~claim 69~~ claim 14 wherein said ~~non-steroidal~~ agent is letrozole.

72. (canceled)

73. (Previously presented) The method of claim 72 wherein said ~~non-steroidal~~ agent is letrozole.